

VIRGINIA STRANAHAN  
MEMORIAL TOWN FOREST  
MANAGEMENT PLAN

ADOPTED BY THE  
SELECTBOARD OF MARSHFIELD, VERMONT

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# 1. Introduction

***When we see land as a community to which we belong, we may begin to use it with love and respect. Foreword, Aldo Leopold, A Sand County Almanac.***

The Virginia Stranahan Memorial Town Forest is comprised of 622 acres of land located between Hollister Hill and Jake Martin Roads, in Marshfield Vermont. The primary goal of managing this property is the protection and conservation of its natural and historic features for enjoyment by the residents of the town of Marshfield and the public at large. Current uses include: recreation (hiking, biking, xc skiing, hunting, fishing, horseback riding, and snowmobiling on the VAST trail), education, wildlife habitat, water quality protection, flood mitigation, and sustainable agriculture and forestry.

The forest is managed by the Stranahan Forest Stewardship Committee (SFSC). Prerequisites for being on the committee are being a resident of Marshfield and having an interest in conservation, management, and recreation.

## **A. Acquisition of the Stranahan Forest**

The Stranahan Property was conveyed to the town of Marshfield on October 12, 2007. The Stranahan Trust first sold the property to the Vermont Land Trust (VLT), which then gifted the land to the town of Marshfield, subject to a conservation easement co-held by VLT and the Vermont Housing and Conservation Board (VHCB). Acquisition funding included a grant from VHCB, as well as donations from one hundred families. The property was named the Virginia Stranahan Memorial Town Forest in honor of the most recent owner. Virginia (Dinny) Stranahan loved this land and had wanted it preserved but unfortunately was not able to accomplish this in her lifetime. Her children generously offered the parcel to VLT at a greatly reduced price.

This Management plan serves as a guiding document. The purpose is to ensure a balance of conservation, agricultural practices, and recreational opportunities for public enjoyment, that are consistent with the conservation easement. The original plan was drafted by the Marshfield Conservation Commission, along with an appointed group of town stakeholders and the Washington County Forester, and submitted to and approved by the Select Board on February 16, 2010. This plan was revised in 2016, and was updated again in 2022.

## **B. Governance of the Stranahan Forest**

The Town of Marshfield Selectboard is ultimately responsible for the management and stewardship of the Stranahan Forest. However, aspects of this responsibility have been delegated to the Stranahan Forest Stewardship Committee (SFSC). Initially created as a five person committee in 2010, the Committee has now expanded to seven members, with committee members appointed by the Selectboard for three-year terms. The SFSC is responsible for the day-to-day management of the forest and develops new policies, procedures, budgets and plans for approval by the Select Board. Major decisions, including periodic management plan updates, require ultimate approval by the Selectboard. The management plan is a point in time document and it is understood that other topics may come up over time that may result in additional appendices being created

## **C. Conservation Easement**

The Stranahan Forest is encumbered by a Conservation Easement (“Easement”) held by the Vermont Land Trust and the Vermont Housing and Conservation Board (Appendix A). The purposes of the Easement are to conserve the property’s natural resources and ecological processes, open space and scenic values, and provide for non-motorized, non-commercial recreation, and education.

Vermont Land Trust acts as the primary easement steward, and conducts annual monitoring to ensure activities on the property are consistent with the terms of the Easement. The Easement requires a management plan, which must be reviewed by VLT. Section 1.B. of the Easement dictates what information the management plan must include. Public input is required for any updates to the Plan. The VLT easement steward is also the Committee’s primary contact for reviews and approvals of proposed actions which are not contemplated in the management plan.

## **D. General Property Description**

The Virginia Stranahan Memorial Town Forest is a 622 acre forest of diverse landscapes located on the western edge of Marshfield. The Stranahan has 500+ acres of forest; the remaining acres are a mix of former agricultural and pasture lands and active hayfields. Prior to the town’s settlement in 1790, the Western Abenaki were the original inhabitants and stewards of the forest. After Marshfield was settled, the forest was privately owned as farm and forest land. The parcel contains several historical house sites, stone walls, and apple orchards. Natural features include vernal pools, rich hardwood forests, two brook trout streams with several associated beaver ponds, wildflowers, and habitat for many plant and animal species. Maple sugaring is a historic and current use of the property, with two separate leases to sugaring operations. Likewise, the hay fields are harvested by local farmers, and other fields kept open through periodic brush-hogging. Many of the former logging

roads are now used as trails. The forest has over 7 miles of recreational trails, including hiking, horseback, biking, and VAST trails.

When viewed from the broader landscape perspective, Stranahan Forest is part of a roughly 2,000-acre forest block that is significant for conservation in Vermont. According to Vermont Conservation Design: Maintaining and Enhancing an Ecologically Functional Landscape (Sorenson et al 2015), Stranahan Forest sits in the midst of a priority Ecologically Functional Landscape area associated with Guernsey and King Brook drainages. It reaches this priority ranking because the statewide analysis shows the Forest as being in a significant interior forest block, as well as connectivity block (for animals and plants to move across the landscape). Furthermore, it contains highest priority surface waters and their associated riparian areas. As viewed from a satellite, this priority forest block containing Stranahan Forest can readily be seen as the forest connection between the extensive Granite Hills (Groton State Forest) forest block and the enormous Northeast Kingdom (Northeast Highland biophysical region) forest block.

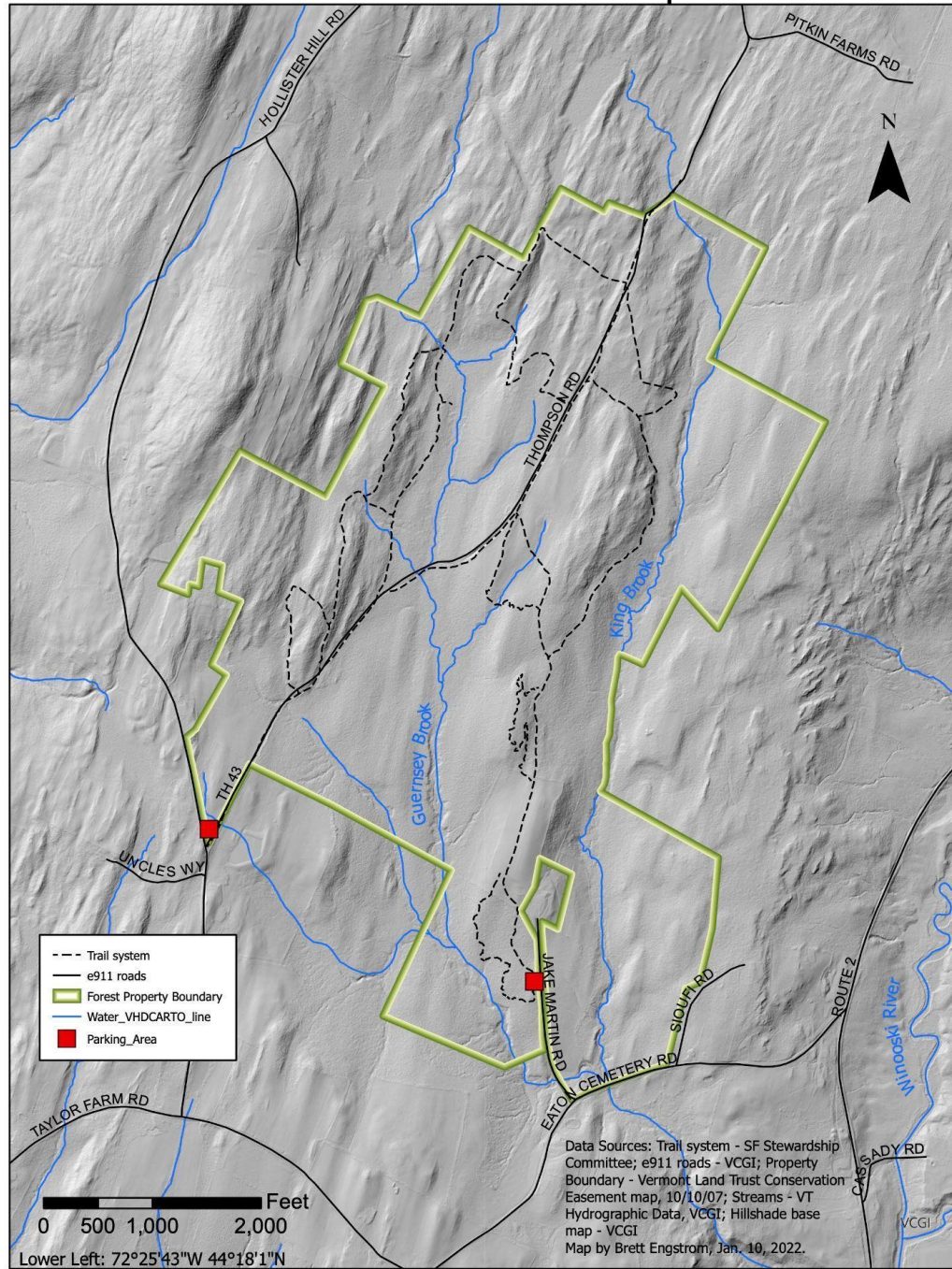
## **E. Public Access**

### **Parking**

Parking is available in two town-owned developed parking areas, one off of Jake Martin Road, and the other near the southern end of Thompson Road, off of Hollister Hill Road. Both of these parking areas include kiosks with trail maps and general information about the Stranahan Forest. Access and limited parking is also available along Pitkin Farm Road, at the northern end of Thompson Road.

See Site Map below

# Stranahan Forest Site Map



## **F. General Rules**

The Stranahan Forest is open to the public year-round.

### **Allowed Uses:**

- Dispersed pedestrian access is allowed on the property for uses such as hiking, walking, wildlife observation, and cross-country skiing unless otherwise noted.
- Trail-based recreational activities, such as hiking, walking, mountain-biking, horse-back riding, cross-country skiing, and other uses, are allowed unless otherwise noted. Mountain-biking and horseback riding are only allowed on designated trails.
- Dogs are allowed on the Stranahan Forest, subject to the Town of Marshfield Ordinance Regulating Domestic Pets.
  - All dogs must be on leash or under voice command and within close proximity of handler
  - Aggressive dogs must be kept on leash and/or muzzled, to prevent harassment or attack of people or other dogs
  - Complaints of dog-related encounters should be reported to Marshfield Animal Control Officer, as well as the Committee to document encounters
- Snowmobiling is restricted to the VAST trail that traverses the property (Thompson Road).
- Hunting and fishing are allowed on the Stranahan Forest, subject to the State of Vermont seasons, rules, and regulations.
- Low impact wild harvesting for personal use is allowed.

### **Restricted Uses:**

- Motorized vehicles are not allowed on the property; except for snowmobiles using the VAST trail, vehicles required for property management, or in case of emergency. A minimum \$500 fine will be charged to any illegal vehicle on the property. The fine will be commensurate with the damage done.
- Temporary tree stands and hunting blinds. See Appendix J for requirements and approval process.

### **Prohibited Uses:**

- Campfires and camping.
- New trail development without prior approval of the Stranahan Forest Stewardship Committee and the Marshfield Selectboard.
- Timber harvest without the adoption of an approved Forest Management Plan.
- Foraging for commercial use.
- Trapping. Trapping poses a safety hazard to visitors and their pets and at this time is seen as incompatible with recreational and educational off-trail hiking by residents, school groups, researchers and hunters. Exceptions may be granted by the Stewardship Committee to address animals of concern/natural resource management concerns, and appropriate signage will notify visitors of the trap location and purpose.

## **2. Land as Natural Features**

The Stranahan Forest encompasses important natural features, including a wide diversity of natural communities, wildlife habitat, agricultural fields, and forests. A partial inventory and assessment of important natural features in Stranahan Forest was conducted during the development of the first management plan. (See Appendix B for the Preliminary Natural Community map.)

A natural community is a particular set of interacting species (plants and animals), the physical environment where they are typically found, and the natural processes that affect them (such as periodic flooding) in the absence of human activity. Examples of natural communities range from small vernal pools (less than one-tenth acre) to northern hardwood forest, which may cover hundreds of acres. A natural community map is an important reference tool to help inform land management practices, and is also an excellent educational resource.



## **A. Upland Natural Communities**

The forested land within the town forest consists of an array of upland forests, such as northern hardwood forest, rich northern hardwood forest, hemlock-hardwood forest, and white pine forest. All of the forests are secondary forests, which means they have been cut and/or cleared in the past for pasture or cultivation, and forest regrew following abandonment.

### **Management Objectives**

- Retain soil integrity, water quality, natural species composition, natural disturbance regimes and natural hydrology.

### **Management Actions**

- Complete natural community mapping
- Control nuisance invasive species that threaten native species

## **B. Wildlife and Plants**

The diverse natural features of the Stranahan Forest – streams, forested and open wetlands, vernal pools, ledges, mature coniferous and northern hardwood forests, and successional forests (see natural community map, Appendix B) provide a broad range of habitats for a great variety of animals and plants. The Stranahan Forest is home to fish and wildlife, such as brook trout in both streams, bobolinks that nest in the Moon Field, beavers in the wetlands and streams, and deer, moose, bobcat, and bear foraging in the forest as well as the wetlands and fields.

Bird diversity is high at Stranahan Forest, as has been documented by birdwatchers over the years. Several bird species that nest at Stranahan Forest, such as northern goshawk and bobolink, are experiencing declining populations throughout Vermont and the Northeastern United States region, and are ranked as Species of Greatest Conservation Need (SGCN) in the most recent (2015) Vermont Wildlife Action Plan produced by the VT Department of Fish and Wildlife. Other animal groups that have SGCN include reptiles and amphibians, fish, invertebrates, and mammals.

Management actions to maintain vulnerable species in the Forest need consideration, which will vary according to species' habitat needs.

While a complete survey of flora of the Stranahan Forest has not been completed, field observations by local naturalists over the past three decades indicate the Stranahan Forest contains over 200 species of plants. The variety of natural communities and features is again key to this diverse flora. While no plants of SGCN have been documented, small populations of two uncommon flowering plants occur in the Forest: mountain fly honeysuckle and American ginseng (Rare and

Uncommon Native Vascular Plants of Vermont, VT Natural Heritage Inventory, VT F&W Department, 2018).

There are several invasive plants found in the Stranahan Forest, including non-native honeysuckle, common buckthorn, Japanese knotweed, wild chervil, common reed or Phragmites, and wall lettuce. Populations of most of these in the Forest are still controllable.

Stranahan Forest is a mapped Priority Connectivity block in Vermont Conservation Design (Sorenson et al. 2015). In conjunction with adjacent woodlands, the Stranahan plays an important supporting role as an animal travel corridor between large, intact forest blocks found to the south and north. These forest connections are especially important as animals adapt to changes in climate.

Most of Stranahan Forest is mapped as a deer wintering area. While a boon for the hunter, browsing by the abundant white-tailed deer likely has a negative impact on tree regeneration in the Forest.

### **Management Objectives**

- Maintain wildlife habitat, especially for Species of Greatest Conservation Need
- Provide connection with adjacent private forestland to support the movement of wildlife through natural corridors

### **Management Actions**

- Document the animals and plants of all kinds, especially SGCN
- Manually control invasive plants, particularly those that threaten habitat for SGCN
- Educate the community about the impact of deer overbrowsing on tree regeneration; encourage deer hunting
- Manage for pollinator diversity

## **3. Agriculture and Forestry**

The Stranahan Forest includes several areas of actively managed and historical agricultural land, some maintained as open space for habitat and recreational use and some that continues to be managed for active forms of agriculture.

### **A. Forestry**

A forest inventory was conducted in 2009 by Russ Barrett and Matt Leonard, foresters for the Vermont Department of Forests, Parks and Recreation, and Ed Jalbert, private forester and resident of Marshfield. The inventory resulted in a draft

Forest Management Plan, to be used at the discretion of the Select Board when contracting with loggers.

Since then, two maple sugaring stands were selectively harvested, prior to the placement of any taps or tubing, using stem-only harvesting in which the tops and limbs of the trees were left on the ground for decomposition, wildlife habitat, and nutrient cycling. An additional 100-acre parcel was considered for harvesting, but no bids were received.

The lack of currently mature stands, a decline in the market for low-grade material coupled with the high cost of infrastructure improvements (culverts on the Thompson Road, a skidder bridge to access areas east of King Brook), low profit margins on any realistic timber sales, and a lack of public interest in timber harvesting, indicate the best course for the next ten years would be to leave the forest uncut. Because of the vernal pool and stream water buffer zones, stands known to be not ready to cut (the sugar bush and areas bid out west of the Jake Martin road and east of King Brook) and the King Brook natural area, there is realistically only about 200-300 acres available for harvest. Much of this is low-quality timber in the most inaccessible areas of the forest. Public input in 2015 (SFSC Survey) and 2018 (Town Forest Planning Grant) show a clear trend of public interest that prioritizes recreation over timber harvesting.

Given the relative lack of interest in timber harvests on the property (from public input process) the SFSC proposes no commercial logging on the property within the next 10 years. Not only does this align with public interest and a realistic assessment of the economics of a commercial harvest, but it allows us to commit to other more valuable resource improvements to enhance both the quality of the forest and the experience of those who use it on a regular basis. This is not a strict no-cut policy, as selective cutting may still be necessary for maintenance and management of sugar bushes, field edges, trails, hazardous blowdowns, or forest successional ecosystems, but is a stance that commercial harvest is not currently a use in keeping with the goals of this management plan. There are many public benefits to forgoing commercial harvests, including increase in carbon fixation in a time of climate change, no disruption of recreation activities and maintaining and/or improving biodiversity.

Since the plan is reviewed and renewed every 10 years, this is by no means a permanent decision, and can be re-evaluated if and as public perception and timber markets evolve. Current conditions, current forms of use, anticipated future market conditions, and anticipated future forms of use, all point the committee towards this position.

### **Management Objectives**

- Manage forest as needed to maintain safe user access (trails) and existing agricultural operations (fields, sugaring)

- Maintain and encourage a diversity of native species
- Protect the forest from the invasion of non-native invasive species, including taking steps to control existing populations of invasive plants.
- Maintain forest as a large intact block of habitat with connectivity to adjacent parcels

#### **Management Actions**

- Conduct regular monitoring of forest condition and species diversity
- Develop work plan to manage invasive species
- Explore and assess feasibility of other forms of revenue generation, including carbon credits or similar programs
- Explore other forms of non-commercial forest management

### **B. Maple Sugaring, Open Fields and Early Successional Areas**

There are two major sugarbushes in the Stranahan Forest with approximately 3,000 taps in total. The Conservation Easement includes maple sugaring as an appropriate use subject to reasonable regulation by the Selectboard to ensure compatibility with other permitted uses, such as trails. Presently two different sugarmakers have leases in the Stranahan Forest. All sugaring contracts should be managed to meet [Guidelines and Licensing Requirements for Tapping and Collecting Sap from Maple Trees on Department of Forest, Parks and Recreation Lands](#), State of Vermont.

The open fields within the Stranahan Forest have been traditionally used for livestock feed. Specific hay fields at the end of Jake Martin Road are leased to local farmers. (The Conservation Easement provides for access to the fields not contiguous to Jake Martin Road through a 4.2 acre parcel with a house and barn that was formerly a part of the property.) The open field and early successional lands along the Thompson Road are important wildlife habitat, and are maintained as such. (See Appendix C, Prime and State Agricultural Soils Map, and Appendix D, Conservation Easement map).

#### **Management Objectives:**

- Maintain sustainable maple sugaring, haying, pasturing and brush hogging practices

#### **Management Actions:**

- Continue multi-year leases for maple sugaring, pasturing and haying, following best practices for soil nutrient management and erosion mitigation
- Brush hog other open areas as needed
- Delay hay cuttings to allow birds to successfully fledge young
- Ensure that sugar maker(s) are responsible for:
  - o Maintaining lines and clearing limbs and forest debris from lines;

- o Protecting vernal pools and other sensitive areas that are clearly mapped
- o Installing tubing such that it does not impede recreation trails outside of sugaring season
- o Using visually unobtrusive tubing color

## **4. Water Features**

The Stranahan Forest is located in the Winooski River watershed, and encompasses a diverse array of natural water features, including streams, beaver ponds, wetlands, and vernal pools. An inventory and assessment of important natural features, both water and upland, was conducted during the development of the initial Management Plan. Subsequent field work has documented and mapped additional natural features. See Appendix E for a map of the major water features and management zones associated with each.

Water, in all of its forms and pathways, is critical for all life - animal, plant, and other. Because of its importance, water has special management provisions set forth as conditions in the Conservation Easement. Federal, state, and municipal regulations also affect management of natural water features; however, in the case of the forest, we are following the more stringent protections required by the conservation easement.

### **A. Streams and Riparian Areas**

The Stranahan Forest contains most of the headwaters of Guernsey and King Brook, two parallel streams whose waters converge as they leave the Forest, then travel less than a mile to join the Winooski River. Riparian areas are the lands bordering streams, ponds and lakes. Because of their intimate connection with surface water features, and their importance on the landscape level for flood mitigation, wildlife movement, and biological diversity, riparian areas are treated as special management zones. These riparian areas are technically referred to as Surface Water Buffer Zones in the Conservation Easement.

#### **Management Objectives**

- Maintain and preserve surface water quality
- Preserve wildlife corridors
- Provide food and habitat, including stream woody debris and leaf litter, to enhance habitat diversity for aquatic and terrestrial animals
- Provide watershed flood mitigation services through riparian buffers
- Protect soil integrity and minimize erosion

## **Management Actions**

- Maintain Surface Water Buffer Zones along perennial streams. As described in the Conservation Easement, these buffer zones include no timber harvest within 50' of each bank or shore, and minimal harvest of single trees in a zone from 50-100' of stream banks.
- Operation of machinery is not permitted within the Surface Water Buffer Zones with the following exceptions described in the Conservation Easement: at existing or subsequently approved roads and landings, and where relocation is not feasible or where negative impacts would be increased by relocating.
- Consider petitioning the state to upgrade the classification of streams in the Stranahan Forest to class A or B-1, in consultation with the Marshfield Conservation Commission.

## **B. Wetlands**

A wide variety of wetlands occur on the Stranahan Forest, ranging from treeless marsh found in beaver impoundments to forested swamp in perched basins. (See map including wetlands, Appendix E). They range in size from a 100 square foot forest seep to a multi-acre marsh or alder swamp. While often in discrete basins, sometimes they occur on slopes where groundwater comes to the surface as seepage forest. All wetlands have in common a special relationship with water, where both surface and groundwater create permanently or semi-permanently saturated soils. Wetlands are critical for biological diversity, or biodiversity. Many animals utilize wetlands during some part of the year, while many plant species can only grow in wetlands. Because of their great importance for biodiversity, and special role in watershed health, both by filtering water and soaking up excess water during floods, wetlands need buffers. The wetlands that are directly connected to streams are included in the Surface Water Buffer Zones detailed in the easement. (See Conservation Easement map, Appendix D.)

The state of Vermont mapped wetlands many years ago for statutory protection. These mapped wetlands are now shown on the Vermont Significant Wetlands Inventory (VSWI) maps. There are many wetlands that do not appear on the VSWI maps because they are often smaller and harder to detect remotely. All the unmapped wetlands - those unofficially mapped and those that might be found in future surveys of the property - should be protected as described in the following Management Actions.

### **Management Objectives**

- Maintain and preserve surface water quality
- Provide watershed flood mitigation services
- Support and enhance biodiversity

## **Management Actions**

- Maintain Surface Water Buffer Zones along wetlands bordering perennial streams. As described in the Conservation Easement, these buffer zones include no timber harvest within 50' of each bank or shore, and minimal harvest of single trees in a zone from 50-100' of stream banks.
- Operation of machinery is not permitted within the Surface Water Buffer Zones with the following exceptions described in the Conservation Easement: at existing or subsequently approved roads and landings, and where relocation is not feasible or where negative impacts would be increased by relocating.
- Protect wetlands not shown on VSWI maps and covered by the easement through the following process:
  - o a) any activity that will create major disturbance – such as timber harvesting, sap extraction, and trail construction - will require a walk-through and delineation of any wetlands before any activity takes place, said delineation being carried out by members of the Stranahan Forest Stewardship Committee
  - o b) no heavy machinery can enter the delineated wetlands at any time, even winter
  - o c) any recreational trails installed must use boardwalks or raised plank to cross these delineated wetlands
  - o d) harvesting of high-risk trees (those that will degrade or die within the next 10 years) can take place within delineated areas, in winter, but trees will be pulled from the edges; any trees unable to be reached with a cable or the boom of a feller buncher will be left alone
  - o e) a 25' wide buffer, where only high-risk trees can be cut, must be retained around each delineated wetland
  - o f) any dispute about the delineation of a wetland area will be resolved in consultation with representatives of the Vermont Land Trust (VLT)
- Complete the SF natural community map, including all wetlands

## **C. Vernal Pools**

Vernal pools are natural woodland pools that are filled with water in the spring and summer, and usually dry by the autumn. This unique water cycle is critical wildlife habitat for certain salamanders and frogs, as well as invertebrates, such as fairy shrimp and fingernail clams. The five documented vernal pools and their buffer zones are mapped as Special Treatment Areas (STA) in the conservation easement Plan, and have prescribed management details in the easement. Note that the STA of the two vernal pools in the King Brook Natural Area have the west side of the buffer zone excluded due to overlap with the maintained fields. This exclusion was approved by VLT in 2009.

## **Management Objectives**

- Protection of the ecological values and functionality of vernal pools
- Perpetuating productive vernal pools and their surrounding forest with interior forest conditions
- Supporting the pools' function as amphibian breeding habitat
- Retaining soil integrity, natural hydrology, water quality values
- Accumulation of large diameter coarse woody debris (logs) as critical salamander habitat, as well as an array of other habitat values

## **Management Actions**

- Adhere to the STA management protocols prescribed for vernal pools and their 600' buffer zones in the easement and as shown on the easement Plan (map)
- Monitor vernal pools annually as part of the Vermont Center for Ecostudies' Vermont Vernal Pool Monitoring Project
- Document and map vernal pools not shown on the easement Plan using Vermont Center for Ecostudies protocol for incorporation into the STA

## **5. Special Protected Areas (SPA)**

In addition to the Special Treatment Areas in the conservation easement, the SFSC has designated two Special Protected Areas due to their important scenic and ecological values. They are shown in the Natural and Conservation Features map, Appendix E.

### **Waterfall and Overlook Scenic Area:**

This small scenic area (4.5 acres) not far from the headwaters of Guernsey Brook features the Stranahan Forest's only waterfall set in a beautiful mature hemlock and spruce forest with a mossy forest floor. This is also the location of a historic mill site. The top of the waterfall affords an overlook of one of the large beaver marshes downstream along Guernsey Brook. Northern spring salamanders have been seen at the waterfall attesting to upper Guernsey Brook's high water quality.

### **King Brook Natural Area:**

Extending for 55 acres along King Brook, this natural area features a diverse rich northern hardwood forest associated with mossy ledges, two vernal pools, two large seeps, a half mile stretch of King Brook, beaver wetlands, and some mature hemlock-northern hardwood forest. It also encompasses most of the Special Treatment Area associated with the vernal pools. The enchanting King Brook Natural Area Trail (an old woods road) runs north-south through the middle of the natural area.



## **Management Objectives**

- Creation of some old-growth forest, including uneven-aged forest structure, accumulation of coarse woody debris, and other ecological features characteristic of a natural forest
- Perpetuating productive vernal pools and their surrounding forest with interior forest conditions
- Maintaining the scenic qualities at the waterfall

## **Management Actions**

- Protect both areas for their scenic and ecological values by excluding from timber harvest and sugaring
- Retain only existing minimal trails for pedestrian access, enjoyment, and education.

## **6. Historic and Cultural Resources**

The Stranahan Forest's historic and cultural resources are tangible reminders that we are not the first people on this land. Historic features remind us that earlier generations of Native peoples and Euro-American settlers continually adapted to changing environments, climates, technologies, and economic and social patterns. Knowing about the past and the people that came before us is important to help us plan for the future.

Use of the Stranahan Forest may date from the earliest Native settlements in Vermont, about 12,600 years ago. The Winooski River was an important travel corridor for this long period of time, enabling early Vermonters to access a rich array of upland foods and plant and animal resources for other necessities of pre-Contact life. Some of the Stranahan Forest's diverse natural water features, including streams, headwaters, wetlands, vernal pools and a waterfall, may have been attractive to humans for thousands of years. Although Pre-Contact Native American campsites and other use sites have not yet been discovered in the Stranahan Forest, today's Forest users can nonetheless imagine that people have used this forest for hundreds of generations before us.

Research confirms that between 1840 and 1940 over one hundred and ten people lived on the land in what is now the Stranahan Forest. The Forest's existing inventory of historic resources includes at least six house sites, two sugar houses, an up-and-down sawmill, and miles of stone walls. Each of the Stranahan Forest's 19<sup>th</sup> century "house sites" are visible today as a single foundation (or cellar hole). However, that foundation was part of a much larger, human-modified, landscape. A typical 19<sup>th</sup> century farm might include a farmhouse, outhouse, one or more barns, other outbuildings, gardens, wells and cistern connected by log or clay pipe water system, dumps and refuse pits, a sugar arch or shack, lanes and roads, orchards, pastures, fencing of various kinds (including stone walls), animal pounds, and

cemeteries or grave sites for family members. Today, the house or barn foundation and stone walls are often the most, or only, visible parts of that original farmstead and farm. Most of the farm site's historic features and archeological deposits that can tell the story of the farm and its occupants over the decades of occupancy lie beyond the foundation. Historic apple orchards continue to grow near the farmstead foundations. (See Appendix F, Historic Features map).

The Stranahan Forest's current uses are compatible with preserving its historic resources. Recreational opportunities and educational programming can foster greater appreciation for and enjoyment of its historic resources.

### **Management Objectives**

- Inventory, document, preserve, and interpret historic resources in the Stranahan Forest.
- Integrate historic resources management objectives and actions with those of other Stranahan Forest resources to the greatest extent possible to foster cross-resource appreciation and compatible goals and actions.
- Maintain healthy and productive apple orchards and encourage our community to pick from and enjoy these survivors from the past.

### **Management Actions**

- Using high resolution [Light Detection and Ranging \(LiDAR\)](#) remote survey and intensive surface survey, map and document historic resources with important values for preservation, interpretation, education, and research.
- Prohibit personal collecting in historic dumps and of other man-made surface objects, such as sugaring buckets, scrap metal, bottles, stoves, household items, etc., as they all contribute to our understanding of the Stranahan Forest's past uses.
- Integrate best management practices for protecting historic resources when cutting trees. "Damage to historic sites is rarely intentional; most often it is accidental and occurs when operators do not know the site locations or their value" (*Guidance for Logging Jobs in Lyme, NH*. 2009).
- Any activity that will create major disturbance will require a walk-through and delineation of any historic resources before activity takes place.
- Any archeological investigations that disturb the ground and that may involve recovery of artifacts must be conducted under the guidance of a professional archeologist, approved by the Selectboard and performed under the direction of the Marshfield Historical Society.
- Restore the apple orchards and improve access to them. Identify the types of apples growing in the orchards. These apple trees represent hardy heirloom varieties. Invite community members to events around apple harvesting.

See Appendix G for the more detailed Stranahan Forest Historic Resources Management Plan.

## 7. Recreation

Recreation is a primary use of the town forest for residents and visitors. In two public input surveys, participants said that the following recreational activities are important to them: hiking, walking their dogs, viewing nature, snowshoeing, and mountain biking in the town forest. Trails provide an important window to the natural world, access to historical features and the working landscape, and a resource for community health through physical activity and exercise.

The conservation easement provides public access for non-motorized, dispersed recreation. The easement also allows for trails for non-motorized, pedestrian use that are consistent with the management plan and easement purposes. Biking, horseback riding and snowmobiling are permitted at the town's discretion, provided the trails are regulated by the management plan and consistent with the easement. The town has granted the local VAST chapter (Twinfield Snow Travelers) permission to use the Thompson Road during the winter season.

The Stranahan Forest presently has seven miles of trails for users to enjoy. The trails include a mix of old roads and new trails built by volunteers. Some trails are for hiking only, while others are multi-use trails, allowing horses and bikes. In the winter months, groomed snowmobile trails provide continued access for walkers, snowshoers, skiers, and winter bike riders. Up-to-date trail maps are available on the town website and at kiosks at both public access points on Hollister Hill and Jake Martin Roads. (See Appendix H, Trails Map)

Because the trail system includes several old roads that weren't built with recreation in mind, there are some challenges for the town forest trail system. Many of the "inherited" recreational components include trails on wet ground with drainage problems and steep grades that lead to erosion. The Thompson Road, the class four road that bisects the property and serves as the snowmobile corridor, has several wet areas that need addressing. In contrast, as new trails are created the committee is adhering to modern trail building practices for sustainable trails that minimize impact and require less ongoing maintenance.

In 2018, the Stranahan Forest was selected as one of only 10 town forests in Vermont to participate in a Town Forest Recreation Planning process, facilitated by the SE Group in collaboration with VT Department of Forests, Parks, and Recreation and the VT Urban and Community Forestry Program. This process included several rounds of public input, guidance from trail professionals, and assessment of the recreational resources of the Forest, and resulted in a proposed Recreation Plan Document (Appendix I) with a series of recommendations for managing recreation in the Forest.

The town forest committee is working to improve the trail system and user experience for all, while balancing recreation with other activities in the town forest. To ensure sustainable trail development and minimal impact, two resources are

used by the town forest committee when considering a trail project: The [Vermont Trail Design Guide](#), developed as part of the Town Forest Recreation Planning Process, which combines best practices specific to Vermont's communities and environment with national best practices for sustainable trails. This Design Guide gives guidance on siting trails within each type of natural community, and includes specifications to reduce impact on those specific communities, as well as guidance on ongoing upkeep and stewardship. Additionally the State of Vermont has published a [List of Trail Resources](#) which compiles many different trail standards documents, some specific to different user groups and related to managing multiple uses.

## **A. Process for Reviewing Trail Project Proposals**

To ensure that the impact from trails and recreation is minimized, the town forest committee carefully considers any repairs or new trail construction projects before making recommendations to the Select Board. All new trails, new uses for existing trails, major upgrades/relocations, or other actions involving either large expense or new forms of impact must be approved by the Selectboard.

- Any trail projects are proposed in writing. The proposal will include a sketch map showing the location of the proposed trail.
- The Stewardship Committee, in conjunction with the Conservation Commission, reviews each proposal, and walks the area of the proposed project, noting any sensitive natural or historical features within 25 feet on either side of the existing or proposed trail. Where sensitive features are located, the route should be altered to give an appropriate buffer and/or special trail construction guidelines should be followed in that area to mitigate any impact.
- The Committee's recommendation regarding the proposed trail is based on the following criteria:
  - Consistency with the easement terms
  - Impacts on the forest's natural and historic resources
  - Extent to which any impacts will be mitigated
  - Trail building specifications (extent to which they are up-to-date and sustainable)
  - Consistency with the Management Objectives of the Stranahan Forest
  - Demonstrated capacity to build, and then steward and maintain, the trail

## **Management Objectives**

- Manage recreational resources and development in a way that does not negatively impact the broader ecological conservation value of the Stranahan forest
- Foster an appreciation for the natural features, agricultural activities, and historic features in the town forest with trails serving as access points
- Balance recreational use with other purposes and activities, including conservation, historic preservation, agricultural activities, and forest management.
- Enhance recreational access for people with all ranges of physical ability

## **Management Actions**

- Conduct a professional trails assessment and review to inform the trail design process so that trails are built and/or improved to modern standards and provide the desired experience for all user groups.
- Work with the Selectboard to evaluate the possibility of changing the classification of the Thompson Road from class 4 to a public trail. Develop a plan to address the drainage issues on the problematic areas of this trail.
- In consultation with VLT and other stakeholders, develop a policy on ebikes that is consistent with the conservation easement.
- Create and post on the town's website a trail proposal form, and formalize the Committee's review process for new or upgraded trails.
- Create trail connections that improve user experience and expand access to all user groups. Consider potential connections to other public lands and/or trail systems.
- Improve trail markers and signage and add winter trail signage that warns snowmobilers of multiple user groups on the trails.
- Improve access to allow ADA accessibility into certain areas of the forest including possibility of ADA trails, ADA picnic areas, or vehicle access to Thompson Cellar area.
- Monitor use at the two parking areas; consider options to accommodate more visitors if determined necessary, while maintaining VLT easement compliance.
- Create a plan to gather more forms of data on recreational use in the Stranahan in order to inform future decision-making.

## **8. Education**

With its natural features, cultural history, and trail system, the Stranahan Forest provides ample opportunities for educational activities geared to residents and visitors of all ages across a variety of topics. For many years, the forest has hosted well-attended public walks focusing on historic features, wildflowers, trees, insects, and birds. In 2015, the Vermont Mountain Bike Association held their annual

sustainable trail building workshop in the forest, and trail builders came from all over the state to learn about sustainable trail construction techniques from professionals. Students from Twinfield School, EarthWalk, Community College of Vermont (CCV) and Goddard College have used the forest for educational activities as well. A local group of wildlife trackers uses the forest routinely to enhance their skills.

#### **Management Objectives:**

- Educate the community on natural features, wildlife, history, working lands, recreation, trail construction, and land management
- Use the forest as a model for the community to learn about healthy forests, including biodiversity and ecosystem functioning, as well as sustainable agricultural and balanced recreation
- Utilize the trail system to teach sustainable trail construction techniques and outdoor recreation skills

#### **Management Actions:**

- Conduct ecology tours
- Hold land management educational events to share details of management projects with the community and give an opportunity for questions and answers about management objectives and projects (wildlife habitat, sugaring, historic preservation, recreation)
- Host educational programs in the forest; encourage Twinfield and other educational institutions to use the forest as an outdoor classroom
- Make available species identification lists (or create a walking interpretive tour)
- Offer trail building and skills events
- Add interpretive signage that tells the story of the historic use of the land, agricultural uses of the land, and the natural features in the forest

## **9. Future Management Plan Updates**

This management plan is intended to be a living and evolving document. Adaptive management is an iterative cycle of evaluating, learning, adjusting, planning, and doing. The Town should make management decisions based on the latest information combined with the resource management objectives. In addition, the Town should be constantly gathering new information to guide future management decisions and update this plan. This plan should be updated, at a minimum, every ten years.

Any changes to the Management Plan must be reviewed by VLT, and any activities on the property which are not contemplated in the management plan must be reviewed

and approved by VLT stewardship staff to ensure compliance with the Conservation Easement (Appendix A).

## **10. List of Appendices**

- A. Conservation Easement
- B. Natural Community Map
- C. Prime and Statewide Soils Map
- D. Conservation Easement map
- E. Natural and Conservation Features map, *(including Special Treatment Areas and Special Protected Areas)*
- F. Mapped Historic Features
- G. Stranahan Forest historic resources management plan
- H. Trails Map
- I. Recreation Planning Grant Report
- J. Specifications for Temporary Tree Stands/Hunting Blinds
- K. Stranahan Forest Stewardship Committee
- L. 2015 Forest Survey
- M. Priority Projects List